FOUR OAKS PRIMARY SCHOOL
SCIENCE POLICY

At Four Oaks we provide our pupils with the essential knowledge and skills needed to prepare them for their future success. We maximise pupils' potential by creating a stimulating, secure and caring environment in which a broad and balanced education is provided. This policy has been drawn up to reflect our whole school approach to Science and has been discussed with staff and has the agreement of the Senior Leadership Team and Governors.

INTENT

The school's aims in Science are to:

- Develop the scientific skills of questioning, making suggestions and predicting, fair testing, observing, using equipment and measuring, recording and communicating findings, drawing conclusions and identifying patterns and trends. This leads to children learning to work as scientists, planning and undertaking scientific investigations and considering evidence derived from them.
- Develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences.
- Develop our pupil's curiosity about the phenomena they observe, experience and explore relating to the world around them.
- Provide opportunities for children to apply key skills to enhance their understanding of Science concepts.
- Use appropriate scientific and mathematical vocabulary to communicate ideas.
- Develop a respect for the environment and living things and an understanding of how human activity impacts on these things.
- Develop children's skills of investigation and to enhance their knowledge of how the world is constructed from their earliest experiential play within the Early Years to more sophisticated investigations by the end of their primary education.
- Develop the attitudes of critical reflection, enjoyment, curiosity, perseverance, co-operation, turn taking, creativity, inventiveness, respect for evidence, open mindedness and willingness to tolerate uncertainty.

IMPLEMENTATION

- Our long-term curriculum map is taken directly from The National Curriculum 2014 and outlines the units to be taught in each year group. This ensures compliance with statutory orders.
- An experiential approach to learning is encouraged and promoted throughout the school where learners are given opportunities to develop their understanding in a variety of contexts e.g. hands on experiences in school including our school grounds and visits to local parks, museums or farms.
- Teachers plan for more enquiry-based learning with pupils so that they take greater responsibility for their learning and develop their investigative skills. All types of science enquiry are recorded in group Floor books
- Science is taught both exclusively in stand-alone lessons and, when appropriate, through links made with other curriculum areas and topics.
- Teachers use a range of resources to support their short-term planning, including but not exclusively: Hamilton trust, Twinkl, Plan Bee and ASE plans.

IMPACT:

- Assessment in Science is ongoing and formative with a variety of strategies used such as observation, discussion, marking and questioning. Assessment for learning encourages children to be more involved in their learning in Science.
- To make a valid assessment of children's practical science skills, a teacher needs to draw on a body of evidence collected over time. Some of these skills are only evident when children are talking in small groups or a class discussion. Floor books are used by mixed ability groups to record ideas, predictions and evidence learning that has taken place in a practical context.
- Information from ongoing formative assessment is used to inform the teacher's short-term planning. Teachers' assessments are recorded at the end of each unit and used to inform future planning.
- Teachers are required to make assessments to inform future planning, both about children's knowledge and understanding and about development of process skills.
- Teachers use a range of strategies to find out where children are at the start of a teaching sequence (e.g. concept maps, mind maps) and use a range of strategies to discover what pupils have learned throughout and / or near the end of a teaching sequence (e.g. reporting to an audience, applying their knowledge in other subject areas, weekly Challenge Grids and concept maps)
- At the end of both Key Stage 1 and 2 teachers make formal End of Key Stage Assessments.
- Whilst the most significant source of evidence for children's achievement will come from the on-going evaluation in lessons, from time to time teachers may feel they need to consolidate these views. Optional Assessment Materials, for example TAPS, may be used for this purpose.

DIFFERENTIATION AND PROGRESSION

The 2014 Science curriculum is a mastery curriculum and all children are expected to achieve.

Our curriculum allows for differentiation by questioning, extension through independent investigation work and re-enforcement activities in assembly time for those pupils that require it.

Progression is demonstrated in our long-term planning.

Teachers use progression documents for medium-term planning which clearly outline what our pupils should know and remember from previous year groups, what they will cover in their current year group and where their learning journey will take them in subsequent years.

CROSS CURRICULAR LINKS

Science is closely linked to the other core subjects with reading, writing, speaking & listening and Mathematics an integral part of science lessons. When working scientifically, children are gathering, recording classifying and presenting data in a variety of ways which supports their learning in maths and have many opportunities to accurately measure using a range of scientific equipment such as Newton Meters, thermometers and measuring cylinders.

Science is often linked to other curricular areas, notably P.E. and P.S.H.E. when dealing exercise, healthy eating and the circulatory system. D&T is the appliance of science in real-life contexts, for example using our knowledge of circuits to make a torch.

MONITORING AND EVALUATION

The subject leaders and senior leadership team are responsible for the monitoring of standards through the scrutiny of pupil books, observation of lessons and through Pupil Voice.

RECORDING AND REPORTING

We report to parents through parent evenings and end of year school report detailing their child's achievements.

SPECIAL EDUCATIONAL NEEDS

Pupils with special educational needs follow the curriculum at an appropriate level and activities are adapted, extended and re-enforced for pupils as required.

STAFF TRAINING

The Science subject leader and the senior leadership team are responsible for ensuring that all staff are adequately trained so that they can deliver the curriculum effectively. This includes organising external and internal CPD; leading staff meetings; sharing resources for planning and teaching and supporting colleagues. Regular communication with staff is sustained throughout the year.

EQUAL OPPORTUNTIES

We are committed to providing a teaching environment conducive to learning. Each child is valued respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

All children are challenged and motivated by a range of activities that cover both knowledge and skills in science. Teachers use differentiated questions that allow both the more and less able child to maintain their involvement in the lesson and demonstrate their knowledge and abilities.

RESOURCES

Science resources are stored centrally in the resource room on the first floor of the building
Resources are audited on a regular basis by the subject leader and monies are allocated to the purchase of new resources to ensure that the curriculum can be delivered in an exciting and stimulating manner.

LINKS WITH THE LOCAL AND WIDER COMMUNITY

Several agencies and external bodies are used to provide children with richer and more varied learning opportunities. Annual visits from an educational science company, life cycle study through incubating eggs and hatching live chicks and close links with our local mobile farm are some examples of providers who enhance children's learning in a variety of settings.

Reviewed: 2025